

LUNAR ECLIPSE

From: <timo.karhula@se.abb.com> To: <SOLARECLIPSES@AULA.COM> Sent: Wednesday, January 10, 2001 9:36 AM Subject: [SE] **The lunar eclipse as seen from Sweden**

For once, we were lucky in southern Sweden (or at least in Västmanland county). Since Christmas, it has been totally cloudy here but sometimes the incredible happens. Right before the lunar eclipse, all the clouds disappeared! I followed the entire eclipse, from the first discerned entrance of the penumbra until it left the Moon's face. I grabbed the opportunity and made a few visual estimates of the brightness of the eclipsed Moon. The estimates were made a few minutes after the totality began and a couple of minutes after maximum. Naked eye estimates (I'm nearsighted and thus all the bright stars become almost as big as the Moon without glasses) as well as estimates through reversed binoculars were conducted.

I could see the penumbra naked eye from 18:31 UT until 22:13 UT. Occultations of the stars SAO79386 (6.5mag) and 63 Gem (5.2m) were timed. Also the star GSC1359:2126 (11.0m) was occulted but was not timed. I observed a very near graze of SAO79396 (9.4m) which was only 2"-3" as closest to the Moon's southern limb as seen with an 8-inch reflector at 90 power.

Site: Lycksta, Västerås, Sweden (longitude = +16.55, latitude = +59.65)

Date: January 9, 2001

Time (UT)	Magnitude	Instrument	Comparison Star(s)
19:57	-2.7	naked eyes	Jupiter
20:30	-1.5	naked eyes	Jupiter and Capella
19:58	+2.0 (-> -2.5)	reversed 8x26 binoculars	gamma Gem
20:24	+3.2 (-> -1.8)	reversed 10x40 binoculars	epsilon and xi Gem

(Corrected total magnitudes after reduction of the reversal effect above should give -2.5 and -1.8, respectively).

The weather conditions were good. Limiting magnitude ~5.8 during totality. Temperature, ~-3 C. There was a very slight haze giving a 5-degree large 'corona' around the Moon during the partial phases. After the eclipse, the oval N-S 'corona' was colourful, with red farthest out and then green and blue. It reminded me of a pollen-halo. Strange! In my opinion, it was a rather bright eclipse, since one could easily see the limb in the umbra naked eye before 19:08 UT (26 minutes after umbral contact). Regards, Timo Karhula

From: Stig Linander <linander@worldonline.dk>

It was totally overcast here in the Copenhagen area. I just got a single five-second glimpse of the eclipsed moon around 20:35 UT.

The upper rim was very bright as one can expect from a "grazing eclipse". But I was somewhat surprised that the bright rim was rather narrow, that the moon except for the bright rim was relatively uniformly dark coloured and with a rather large contrast between the "disk" and the rim.

Just a first impression from a five-second glimpse. I never got a chance of a second impression :-)

On the other hand, if I had to choose between clear sky 9th January and clear sky 21st June, I'll definitely choose 21st June ;-)

But others in Denmark were more lucky with the clouds. See the images taken by students at Amtsgymnasiet in Sønderborg: <http://www.amtsgym-sdbg.dk/as/ec1-2001/default.htm>

Other photos can be seen at: http://www.spaceweather.com/eclipses/gallery_09jan01.html Best regards, Stig.

From: Stephen McCann ITN <stephen.mccann@roke.co.uk>

Just to add to Timo's great report, that I followed the penumbral shadow until 22:14 UT with naked eye.

Thanks Stephen McCann

Right before the lunar eclipse, all the clouds disappeared! I followed the entire eclipse,



LUNAR ECLIPSE

CASTRICUM, HOLLAND

From: J.P. van de Giessen <jpvdgiessen@gelrevision.nl> To: <SOLARECLIPSES@AULA.COM> Sent: Wednesday, January 10, 2001 6:14 AM Subject: [SE] Total Lunar Eclipse - 9 Jan 2001



Hello all, Here a small report from the Barneveld, Netherlands: Weather was rather good, only a little bit of mist. Only at the end it was getting cloudy but not before the moon. Color: not reddish, more orange.

A very good start for the 3rd millennium: Sitting in the garden, a glass of wine, a piece of cheese and a good eclipse. I hope you all have enjoyed the eclipse too. Jan Pieter van de Giessen

From: Carton, WHC <Wil.Carton@corusgroup.com>

Fellow Observers, Fog, mist and clouds above the Castricum observatory in the dunes of N-Holland interfered the total lunar eclipse of yesterday-evening from 5 minutes after 2d Contact (20:50 MET) onward. Minutes before 19:30 MET, a quarter before 1st Contact, already the penumbral darkening on the moon's south-eastern side was very distinct. 1st Contact with the umbra looked to happen earlier than predicted. So I got the expectation of a very dark eclipse, and feared that totality would not be visible through the thin veil of clouds. Eleven members of the amateur astronomical group 'Metius' from Alkmaar prepared the dome, telescope and equipment to perform crater umbra-entrance timings. But the umbral edge was not distinct and had a fluent intensity change into the penumbra, a "fading" phenomenon. About five minutes before 2d Contact, the last lunar crescent on the upper side looked to extend out from the weak grey-brown lunar disk, like a polar cap seems to extend out of the disc of Mars. The ends of the crescent appeared light blue-grey. Five minutes after 2d Contact, thicker layers of fog, mist and clouds drew in front of the eclipsed moon and after some short reappearances the moon was completely clouded out. Only a quarter after 3e Contact, the re-viving lunar crescent sailed for five minutes between the masses of clouds. From then it was clouded out permanently. Wil Carton, Castricum, Holland.



ANNAPOLIS, MARYLAND, USA

From: James R. Huddle <huddle@usna.edu> To: <SOLARECLIPSES@AULA.COM> Sent: Wednesday, January 10, 2001 8:49 PM Subject: Re: [SE] Moon Eclipse January 10th

And I just barely missed this fascinating sight. Here is the chronology of the end of the lunar eclipse from where I live:

Event Local Time in Annapolis, Maryland, USA
U4 16:59
Moonrise 17:01
Sunset 17:02

As I tell my Naval Academy students: If the ship leaves without you, it doesn't matter if you missed it by two minutes or by two hours. But it wasn't that close for me anyway. I don't have a clear view of either horizon, so the Sun went out of view several minutes before 17:02, and the moon was not visible until 17:12. At 17:12, though, and for a few minutes afterward, the moon was a beautiful tangerine color. I presume the penumbral eclipse and the low altitude of the moon both contributed to the coloring.

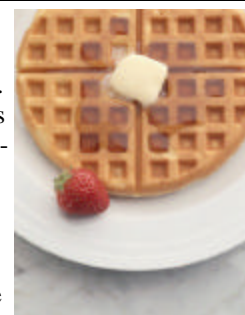
Jim Huddle



GEMBOUX, BELGIUM

From: Raoul Lannoy <raoul.lannoy@pandora.be> To: 1Eclipses <solareclipses@Aula.com> Sent: Wednesday, January 10, 2001 6:58 PM Subject: [SE]

The mysterious moon



Hello all, Ok, so one half an orbit after the partial solar eclipse seen in the US for Christmas day, we got to see the Total Moon Eclipse last night from Europe, and Belgium! The funny thing was that it took place right when the astronomy club holds its session (second and fourth tuesdays of the month) in Gembloux (30km south of Brussels); we had 3 telescope and 3 pairs of binoculars. We started having problems to see it because of a haze but later on, it was much better. Wasn't there a star that got occulted on the southern part of the Moon? When the sun reappeared, we had a very good view of Shroter Vallei ! But that's not all about the Moon!! Last Saturday, I looked at it through my 20x80 binoculars when suddenly, I noticed a light was heading towards it. It actually was Mir crossing the Moon (more exactly, it disappeared because of the Moon's glare and reappeared right after). Amazing Moon, sometimes!

Raoul Lannoy



LUNAR ECLIPSE

From: Olivier Staiger <olivier.staiger@span.ch> To: <SOLARECLIPSES@AULA.COM> Sent: Thursday, January 04, 2001 5:35 AM Subject: [SE] **lunar eclipse**

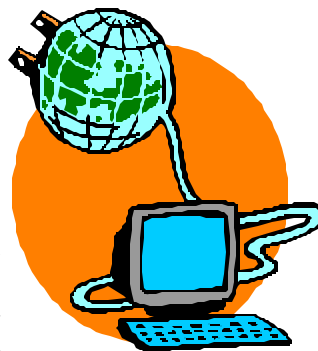
>Evan H. Zucker wrote: I'm glad I made it back in time to catch any discussion of next week's total lunar eclipse (assuming that's allowed on a list devoted to solar eclipses).

Hi all, speaking of January 9, I'm planning to do a live webcast from Switzerland, and I've compiled a number of links to other webcasts. see <http://eclipse.span.ch/090101.htm> my live webcast will be at <http://eclipse.span.ch/liveshow.htm> A great show should be coming from Japan at www.live-eclipse.org and lots of other cams are listed at <http://www.universetoday.com/html/special/le0101.html> For our american friends (who cannot see the eclipse), the eclipse starts at 1:42 PM EST , 10:42 AM PST. Enjoy the show. Klipsi

From: Olivier Staiger <olivier.staiger@span.ch>

Dear friends, here is a list of links where you will be able to see live images of the lunar eclipse January 9-10. I send this message to you so you can go to the other webcams directly (not only through my site) in case my own server should have problems (ya never know....)

I will myself will webcast on <http://eclipse.span.ch/liveshow.htm> others: <http://www.live-eclipse.org> (from Japan, several cams, probably streaming high-tech) <http://www.universetoday.com/html/special/le0101.html> (worldwide, lots of cams listed, including several of the ones here) <http://www.geocities.com/jkty5597/webcam.html> (The Philip-pines) <http://www.dataprofi.de/astro/live.htm> (Bremen Germany, and a copy from me) <http://server.geoman.net/lune/> (France, lots of links to various cams. Geoman.net also runs a french edition of the famous Astronomy Picture of the Day site. A great way to learn french !) <http://www.cieletespace.fr> , great french astronomy magazine, will also have links to various webcams in France and abroad <http://www.akh-wien.ac.at/user/moose/Finsternis/index.html> (Austria and Germany) <http://www.guetali.fr/home/thpayet/> will probably webcast from La Reunion island in southern Indian Ocean (off Madagascar), if weather is acceptable (recently near-missed by 200 km/h winds of Typhoon Ando) Enjoy the show ! best regards, Olivier "Klipsi" Staiger



From: Olivier Staiger <olivier.staiger@span.ch>

>How did your eclipse and broadcast go?

very bad I got cloudy skies. Saw full moon rise in thin cirrus, but thicker clouds arrived before first contact. I could have driven eastwards, to Bern or Zurich, where skies were better, but I was too tired to drive back after the eclipse and I had to work today ... I should have taken off from job on January 10, too. So I went home to follow it on the web from other sites. Lots of them had clouds, too. I saw it live from England and La Reunion Island, and Austria, too. Despite the fact that I did not succeed in showing live images of the eclipse I still got huge traffic on my site yesterday: 265'772 hits, 22'146 sessions... Klipsi

From: Assoc Prof J R Huddle <huddle@usna.edu>

Klipsi wrote: "Despite the fact that I did not succeed in showing live images of the eclipse I still got huge traffic on my site yesterday: 265'772 hits, 22'146 sessions..."

Perhaps that's because they mentioned your web site in the current issue of Newsweek, along with a photo Fred Espenak shot last July in Maui. Always nice to see some of our friends making the Big Time! Congratulations, guys!
Jim Huddle



LUNAR ECLIPSE

From: Sheridan Williams <sheridan@clock-tower.com> To: <SOLARECLIPSES@AULA.COM> Sent: Thursday, January 11, 2001 6:23 PM Subject: [SE]

Lunar annular eclipse?

With the Moon receding from the Earth, can anyone work out how long it will be until the Moon is exactly the size of the Earth's umbra, and future lunar eclipses will at most be annular?

I had the best view ever of a total lunar eclipse, with sparkingly clear skies in Bedfordshire, England.
Sheridan Williams

From: Carton, WHC <Wil.Carton@corusgroup.com>

Sheridan, That will never happen. Fourty years ago I learned from the colloquia "Celestial Mechanics" (Prof. G.B. van Albada in Amsterdam University) the equation of Impulse-moment of the Earth-Moon system and I remember that in the far future the lunar recession will stop as soon as the siderial month is equal to the siderial day, that is when the Earth turns permanently its same hemisphere to the Moon (like nowadays already the Moon does to the Earth). The calculation from that equation delivered a daylength of 48 present days. The Moon then completes its orbit also in 48 present days (now 27 days). Sorry that I am not able to recapitulate that formula and calculation now. I quote from memory that result of 48 present days. From that value, the Kepler-law $[(a^3)/(T^2) = \text{constant}]$ can be used to calculate the distance of the Moon in that far future. Here a denotes the half long axis of the lunar orbit, T denotes the orbital period. Substitution learns me that (a^3) becomes $(48/27)^3$ as large as now, that is $2304/729 = 3,16$. The third power root of 3,16 is 1,47; so the moon's distance a will then amount to 1,47 times the present value (47% more than now). At present the distance of the Moon is 30 * the Earth diameter, that will grow to $1,47 * 30 = 44$ Earth diameters. But the length of the Earth umbral cone is 109 Earth diameters. How far under the apex of the cone, the umbral diameter is equal to the Moon's diameter? That is at $109 * \text{Moon's diameter under the apex}$, that is $109 * 3476 / 12756 = 29,7$ Earth diameters under the apex, that is $109 - 29,7 = 79,3$ Earth diameters from the Earth, MUCH MORE than the futural Moon's distance (44 Earth diameters).
Wil Carton, Castricum, HOLLAND.



I remember that in the far future the lunar recession will stop as soon as the siderial month is equal to the siderial day, that is when the Earth turns permanently its same hemisphere to the Moon

MT LOFTY, AUSTRALIA

From: janita hill <janitah@senet.com.au> To: <SOLARECLIPSES@AULA.COM> Sent: Tuesday, January 09, 2001 11:26 PM Subject: [SE] Moon Eclipse January 10th



10.01.01 (or in the USA: 01.10.01) In South Australia our local astronomical society was challenged to this: "For Adelaide's Mt. Lofty Summit (727 metres) there might be a 48 second interval when the upper edge of the sun is visible, and 180 degrees away on the opposite horizon part of the eclipsed Moon could be observed. Anybody want to take up the challenge of sighting the Sun and eclipsed moon with one twist of the head? Tony Beresford, Technical Information Officer ASSA"

Four of us were fortunate to be able to access the firespotting tower on Mt. Lofty, which gave us an extra 34 metres elevation and more importantly, cleared us of the trees obstructing some of the view. It was possible to watch the eclipsing Moon and the rising Sun as mentioned above. Unfortunately, although the sky was cloudless, there was a mist/smog all around so that when the Moon was totally eclipsed it 'disappeared' which made timing of the event impossible. However, the mist/smog made the sun brilliant red and easy to photograph. It occurred just after 6 a.m. local time. (GMT + 10 and 1/2) cheers, Janita Hill

From: <ez@mrtotality.com>

I recall this situation also occurred during a TLE in North America around August or September 1979. I believe I could a glimpse of the sun and the eclipsed moon simultaneously from a field in Wisconsin. Evan Zucker



LUNAR ECLIPSE

From: John Tilley <john@tilley.demon.co.uk> To: <SOLARECLIPSES@aula.com> Sent: Tuesday, January 09, 2001 11:06 PM Subject: [SE] **Total Lunar Eclipse - 9 Jan 2001**

Tonight's total lunar eclipse was almost clouded out - but we had a 65 minute reprieve at the end - anyway it was all not visible from my back door.

Pretty cloudy in rural Hampshire England - just north of Winchester. The clouds had moved in by 17:00 - the BBC web site had a great animation of how the clouds had timed it perfectly - just as they did for the total solar eclipse of Aug 11th 1999.

A combination of low and high cloud and nothing was visible at all - absolutely nothing. P1, U1, U2 and mid eclipse came and went - Jupiter was just visible and a dull patch where the moon might be. Nothing else at all. Back to dinner - however at mid eclipse the sky was definitely tinged with red as well as grey - there are no street lights where we live - so it had to be the eclipse.

Back to dinner and then at 19:50 - the lower clouds parted - just before U3 - and Orion and the moon appeared - just. Sirius was just visible through the cloud - but Orion's belt was fairly visible through high clouds. A small part of the moon was brown/red - like the colour of a fine wine that has seen better days - but most of its disc was a brown/gray colour. Totality was over and a faint crescent of dull white appeared - the moon's disc was now fully visible - but mainly brown.

Within an hour the clouds returned en masse - oh well better luck in May 2003 - which will be a fantastic month with the transit of Mercury from our garden, a total lunar eclipse from my back door followed by an annular solar eclipse at sunrise in N Scotland.

Any advice on what wine goes with either a transit of Mercury or an annular solar eclipse? John Tilley

From: Stephen McCann ITN <stephen.mccann@roke.co.uk>

Weather can be a strange thing ! I live only 15 miles (20 km) or so due south, from John Tilly '...in rural Hampshire England...' in Southampton by the sea, and yet had clear skies.

I observed all of the eclipse last night and only suffered high clouds prior to U1 and then a little haze upto mid totality.

I have assigned last night's eclipse a Danjon number of 1.5, as lunar features wre hard to distinguish in the central umbra (brown/grey), whereas the outer edge of the umbra was a dark red colour. Stephen McCann

From: Patrick Poitevin <patrick_poitevin@hotmail.com>

Joanne, Laura and I observed totality successful from home in Rowlands Castle, England. Clouds disappeared just before totality but crossed over the partial eclipsed Moon again after the totality.

It was a beautiful sight. It looked like Mars was enlarged in the sky... During Lunar Eclipses, at least, you see for sure the Moon is a bal... Best regards, Patrick

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

Hello Stephen, This is strange, to us (Alexander Birkner and me) it seemed to be quite a bright eclipse. The moon did look rather dark to us, but that was probably due to the thin high clouds we had. In fact, it had the copper red of our German Pfennig-coins :) Beside that, the part of the lunar limb that was closest to the edge of the umbra looked rather bright to us all the time during totality, especially near U2 and U3. We even noticed a bluish hue on that rim. That points to a rather bright eclipse, not a very deep one.

(Continued on page 31)

Pretty cloudy
in rural
Hampshire
England - just
north of
Winchester

LUNAR ECLIPSE

I'm curious how bright or dark the others estimate the event. Best regards Marc

From: Stephen McCann ITN <stephen.mccann@roke.co.uk>

Marc, Yes, I'm increasing becoming sceptical about my own report !

I was very carefully to write it based on my observations of lunar eclipses over the last 15 years, before I read any reports on the mailing list to avoid bias.

Perhaps I didn't take into account the full effect of the high cloud haze present over N-W europe at the time. Let's see what the others say. Kind regards Stephen McCann

From: Crocker, Tony (FSA) <Tony.Crocker@transamerica.com>

Last January in California we had thin haze around second contact and I would have rated the eclipse about 1.0 on Danjon scale (basically gray color). Then, after about half an hour of heavy cloud cover it cleared out completely before third contact, revealing a much brighter eclipse of about 2.5 (rust-to-brick color with a yellow bottom rim).



ANOTHER MEMORABLE PARTIAL.....SOLAR ECLIPSE

From: HALDUN MENALI <himfaxbox@usa.net> To: <SOLARECLIPSES@AULA.COM>; <solareclipses@aula.com>
Sent: Sunday, January 28, 2001 11:37 PM Subject: Re: [[SE] **Another memorable partial...**]

Hi, I also observed the 1976 eclipse as a partial one from Istanbul, Turkey. I was 13 and this event was one of the reasons for my involvement in astronomy.

Sorry for my belated reply. I came upon your email while I was working on my report of Christmas 2000 eclipse I observed with my wife from Boston, MA. I have just posted a preliminary page at <http://members.aol.com/himenali/astro/xmasolar.html> I will update it in the coming weeks. Enjoy! Regards, Haldun I. Menali

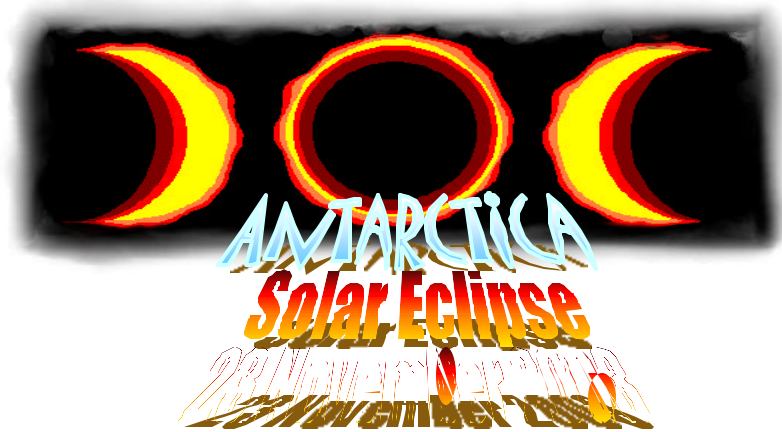
From: Eric Pauer <pauer@bit-net.com> To: Solar Eclipse Mailing List <solareclipses@aula.com> Sent: Monday, January 29, 2001 6:01 PM Subject: [SE] Christmas Eclipse Animation

From my video tapes of the Christmas eclipse taken from New Hampshire (USA), I captured 40 video stills, spaced about 5 minutes apart. My camcorder was set for a 25X optical zoom. I aligned the images using Adobe Photoshop and then created an animated GIF. The 3+ hour eclipse is played back in about 4 seconds. I find it interesting to watch the moon's disk slide across the top of the sun. Enjoy!

Small version of animation (72K) at the bottom of: <http://www.bit-net.com/~pauer/eclipse00/ephotos/ephotos.html>

Large version of animation (581K) at: http://www.bit-net.com/~pauer/eclipse00/ephotos/lg_christmas_anim.html Regards, Eric





PRESS RELEASE

In November 2003, Adventure Network International and TravelQuest International will fly a group of eclipse chasers from Cape Town, South Africa to the southernmost continent in the world to witness a Total Solar Eclipse across the frozen landscape.

Adventure Network International has been taking travellers into the Antarctic interior for over fifteen years. Some have searched for peace and tranquillity. Others went seeking a buzz they had never experienced before. **Adventure Network International** has always been pioneering and individualistic, and this new adventure is no different.

As one of America's premier organisers of eclipse tours, TravelQuest International always has the very latest technical details available on each solar eclipse. Each tour is meticulously planned and is accompanied by an expert in the field.

The team will be flown into Antarctica on one of ANI's aircraft. A few days of preparation at Adventure Network International's Dronning Maud Land base camp will precede the Eclipse Day. The clear atmospheres and clean stark landscapes of Antarctica should allow for some breathtaking photography of the eclipse.

Between seven and ten days will spent in Antarctica (weather dependant), giving you enough time not only to view the eclipse, but to immerse yourself in the sparkling surroundings of this magnificent frozen continent.

This is a one-off departure and spaces are strictly limited, so reserve soon to avoid disappointment. Please contact Travel Quest International if you are in the USA or Canada, or ANI if you are in Europe and the rest of the world.

Adventure Network International, 15a The Broadway, Penn Road, Beaconsfield, Buckinghamshire HP9 2PD, UK. Aram Kaprielian, TravelQuest International, 570 Skyview Drive, Prescott, Arizona 86303, USA Tel: (44) 1494 671 808

Fax: (44) 1494 671 725

E-mail: general@adventure-network.com

Web: www.adventure-network.com

Tel: 800 830 1998/ (520) 445 7754

Fax: (520) 445 8771

E-mail: tquest@primenet.com

Web: www.travelquestinternational.com

ANTARTICA 23RD NOVEMBER 2003

From: Olivier Staiger <olivier.staiger@span.ch> To: <SOLARECLIPSES@AULA.COM> Sent: Wednesday, January 24, 2001 5:24 PM Subject: [SE]

2003 TSE just after local midnight Sun !

an interesting thought about the 2003 TSE in Antarctica:

Have you ever dreamed of seeing a total solar eclipse at (or near) midnight, with the midnight sun? you know, last summer, I saw the partial solar eclipse 30th July (31 July in Siberia) from Canada's High Arctic Baffin Island. It was locally after 9 PM at mid-eclipse. But it was only a partial eclipse. And it was still hours before midnight. And the midnight Sun was no more visible because of high mountains in the north (Bylot island)

Now, the path of the 2003 TSE November 23 deserves some attention: You can see a total eclipse just a few minutes after local midnight (midnight Sun) if you choose the right place.

The Umbra lands on Earth at 22:19 GMT in the southernmost Indian Ocean (where locally it is early morning of November 24), and within one hour it rushes along the 90° East longitude, across Antarctica and towards the southernmost Atlantic Ocean (westbound!), south of South Africa. The Umbra leaves Earth right on the coast of Antarctica, with a centerline at 14°55' Eastern longitude, seconds before 23:19 GMT. Question: what is the local time at 15° Eastern longitude at 23:19 UT? It is the same time zone like Austria, in Europe. And that area is 1 hour ahead of GMT, so on the centerline the local time would be 00:19 AM. The shadow is 500km wide, and the umbra goes as far as 8°51' Eastern longitude, and that area is still at GMT +1h. Thus, the total solar eclipse occurs at 00:19 local time, just a few minutes after local midnight. You will see a deep partial eclipse with the midnight Sun, and totality less than 19 minutes later!

Of course the Sun is at 0 degree elevation (smack on the horizon), and if you have a hill or if the coast line is sharply rising into cliffs and mountains, you won't see it. And clouds are quite likely, too. Thus you need an aircraft or helicopter to fly up a few thousand meters, to "bring down" the horizon.

This area is due south of South Africa. It would be an interesting thing to do: fly from South Africa to Antarctica and see the midnight Sun and the eclipse and fly back.

There are two science stations there within (or near?) the path of totality, on the Atlantic coast line: the Russian station NOVOLAZAREVSKAYA and the Indian station DAKSHIN GANGOTRI. According to the Lonely Planet travel

guide to Antarctica both these stations are inhabited all year round, thus there will be some lucky people there on the "night" of November 23-24, 2003. But, again, if they have hills or mountains to the south (most probably they do) they will be "hilled out". But if they have a helicopter they may fly up and see the total solar eclipse just after the midnight sun!

Would be nice to organize a flight from South Africa to see this... Olivier "Klipsi" Staiger

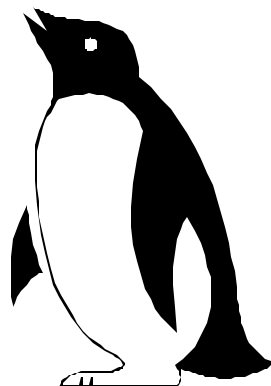
From: Jean Meeus <JMeeus@compuserve.com>

What Mr Staiger writes is interesting.

However, I would ask him not to use the abbreviation GMT. For many people, principally all navigators and the people in the United Kingdom, "GMT" is identical to UT. However, strictly speaking this is an error.

In astronomy, the expression "mean time" has a well-defined definition. It is 0 hour mean (solar) time when the mean Sun is in *upper* culmination; that is, near noon. (Just as the sidereal day begins when the vernal equinox crosses the meridian at upper culmination). It is the *civil* time which begins at midnight. So, Universal Time = Greenwich *Civil* Time = Western European Time, which differs from "GMT" by 12 hours.

Please use the abbreviation UT instead. Jean Meeus



ANTARTICA 23RD NOVEMBER 2003

From: Sheridan Williams <sheridan@clock-tower.com>
To: <SOLARECLIPSES@AULA.COM> Sent: Saturday,
January 20, 2001 10:45 PM Subject: [SE]

2003 TSE

The following information from ANTARCTIC NON-GOVERNMENT ACTIVITY NEWS (39) might provide a way of viewing the total eclipse in 2003. Does anyone have contacts that can establish if the routes cross the track at the right time and date. Sheridan Williams

NEW AIR ROUTE TRANSITING SUB-ANTARCTIC, ANTARCTIC, REGIONS [ANAN-39/04]

A new non-stop, regular public transport (RPT) air service between Sydney, Australia, and Johannesburg, South Africa, which the Australian airline Qantas commenced on 15 January, will involve regular overflights of sub-Antarctic, and at times Antarctic coastal, regions. Flights on the new route will increase the level of RPT activity around the fringes of the Antarctic continent, and will see large wide-bodied jets regularly operating in higher latitudes of the Indian Ocean sector than before.

The new Africa-Australia service is designed to provide a quicker service between the key economic centres of southern Africa and Australia which eliminates the need a refuelling stop in Perth, Western Australia.

The Australian airline currently plans to conduct four return flights each week on the new Sydney-Johannesberg route, with the west-bound journey taking just over thirteen hours, and the east-bound around eleven hours and possibly less if weather and other conditions are favourable. The shortest, or Great Circle (GC) distance, between Sydney and Johannesburg is close to 9,500 km, and an aircraft following the GC for the new south Indian Ocean route would pass over or near sub-Antarctic Heard Island or Kerguelen during the journey.

Despite the theoretical attraction of the GC route however, in practice the actual ground track of flights will vary depending on the prevailing winds and temperatures at cruise altitudes as well as aircraft parameters that change from day to day.

In addition other issues must be considered by flight planners, including ensuring that at any point along its planned route, the aircraft has the ability to reach a suitable airfield in Africa or Australia in the event cabin pressure is lost or an engine fails. Both of those scenarios are considered low probability events by aviation experts, however they are standard considerations for Qantas in planning all of its

flights, including Antarctic tourist overflight operations (ANAN-7/04, 27 October 1999).

These variables mean that the aircraft's Latitude at the mid point of the new flight route, which will be in around Longitude 90° East north of Wilhelm II Land, could vary anywhere between Latitudes 45° and 70° South; although under Qantas flight rules aircraft will not be permitted to fly further south than Latitude 65°. Given the geometry involved, without Qantas' self-imposed latitude limitation, should an aircraft actually fly to Latitude 70° on the new route, it would probably be operating up to 350 km south of the Antarctic coast in the vicinity of the northern Prince Charles Mountains in Mac.Robertson Land.

High latitude RPT operations in sub-Antarctic and Antarctic regions commenced in the South Pacific sector in the late 1980s when the Argentinian airline Aerolineas Argentinas (AA) commenced flights between Buenos Aires and Auckland, New Zealand (NZ) using Boeing 747 aircraft. Qantas joined the Argentine company on the route in 1998 following the down-turn of the Asian market, and between them the two companies now operate up to six flights with 747 and Airbus A340 aircraft each way every week of the year. In GC terms alone the new Australia-Africa route is some 600 km longer than that between Auckland and Buenos Aires.

Flights eastwards from NZ normally travel across the South Pacific in between Latitudes 50° and 55° South in order to use the strong westerly winds that prevail for much of the time in that corridor. Westbound flights from Buenos Aires are different however as they try to avoid the strong westerlys, and as a result they often dip much further south, sometimes flying very close to, or even over, parts of Marie Byrd Land en route to NZ. AA is understood to have flown as far south as Latitude 78° on some occasions, while Qantas says that it limits its operations to Latitude 73° whatever the conditions prevailing.

Qantas operated a non-stop service from Melbourne to Johannesburg for several years from the mid 1990s and this regularly saw aircraft overflying places such as Heard Island and Kerguelen, however that operation was discontinued in 1998. One of the best images ever taken of the normally cloud-covered Heard Island was captured on film by the Captain of one of those flights in 1997.

Since then Qantas and South African Airways (SAA) have continued to operate flights between Perth, Australia, and Johannesburg, however these do not travel much further south than Latitude 50°. SAA is continuing to operate the Perth-Johannesberg service with Qantas as a code sharing

(Continued on page 35)

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partner, while the Australian company operates its aircraft on the new direct route.

While there are no known plans for such an operation, one of the most interesting potential future flight routes in Antarctic terms is that from New Zealand to South Africa. The theoretical flight path for it would take an aircraft very close to the South Geographic Pole, however a report in the magazine 'Aircraft and Aerospace' last August, claimed that SAA had examined the potential for such a service but that it had assessed such an operation "as being too fraught with risk for a 747-400 in the event of even a single engine failure over the middle of the continent".

From: Michael Gill <eclipsechaser@yahoo.com>

Although it would not be unprecedented to see an eclipse from a scheduled air service (see Sky and Telescope January 1991, page 104 for an account of the expedition of Joe and Renate Rao, Sam Storch and Craig Small during the July 1990 eclipse), I think that a dedicated charter aircraft would give a better chance of success.

With that in mind, Croydon Travel of Victoria, Australia organises Antarctica sightseeing flights on Qantas 747-400 aircraft. They are aware of the November 2003 eclipse and they hope to put on a flight for it. <http://www.antarcticaflights.com.au/> Michael Gill.

From: Vic & Jen Winter, ICSTARS Inc.

I don't suppose your Lonely Planet mentions how easily researchers get to these outposts.

Mine reads: (Dakshin Gangotri - originally established as a refuge hut in 1982, a new station was reconstructed in 1984 and is staffed by 15 in the winter and 40 in the summer) (Novolazarevskaya can accommodate about 57 winter and 60 summer personnel.)

We've been negotiating with several organizations about transport to the continent. I have only been successful speaking with one commercial air operator (Adventure Network International) and one passenger icebreaker operation who claim to be able to access the eclipse path with existing equipment as is. The icebreaker was actually planning their meteorite expedition into the path last November, but happened to change their plans and an approach from the Tasmanian side instead for convenience.

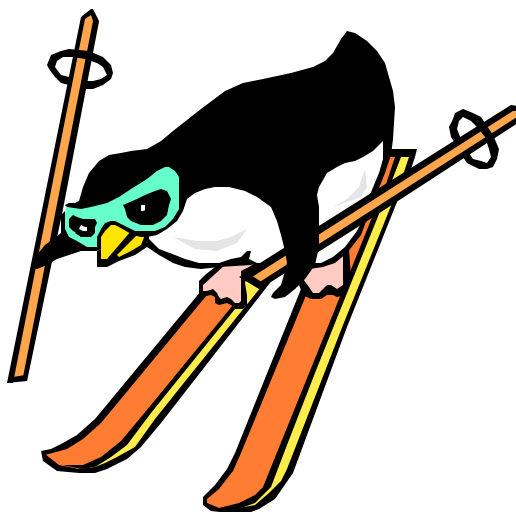
We haven't looked much farther into air due to the extreme danger (over 50 aircraft wrecked aircraft are still left on Antarctica) and since it they would require camping trips and a heftier price tag. (lest we expel the researchers from existing

stations for ourselves.)

Looks like it's going to be an interesting and expensive expedition one way or another.

Vic & Jen ICSTARS

There are two science stations there within (or near ?) the path of totality, on the Atlantic coast line: the Russian station NOVOLAZAREVSKAYA and the Indian station DAKSHIN GANGOTRI. According to the Lonely Planet travel guide to Antarctica both these stations are inhabited all year round



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From: Marc Bernstein To: SOLARECLIPSES@AULA.COM Sent: Friday, January 26, 2001 1:29 AM Subject: [SE]
Africa guidebook

Has anyone reviewed the Bradt Africa/Madagascar eclipse guidebook. Is there anything in here that's not in the Lonely Planet book or the NASA eclipse bulletins?



From: Jeff Batten <jeff.batten@csun.edu> To: <solareclipses@aula.com> Sent: Friday, January 26, 2001 12:01 AM Subject: [SE]
Africa Maps

If you are going to see the eclipse in June you might be interested in this link. http://www.sas.upenn.edu/African_Studies/CIA_Maps/menu_CIA.html Jeff



From: Stig Linander <linander@worldonline.dk> To: <solareclipses@aula.com> Sent: Thursday, January 25, 2001 6:51 PM Subject: [SE]

Astronomy Education

Students at Sønderborg Amtgymnasium used the TLE of 09-Jan-2001 to measure the distance to the moon: <http://www.amtsgym-sdbg.dk/as/moondist2001/uk.htm> Best regards, Stig.



From: Sheridan Williams <sheridan@clock-tower.com> To: <solareclipses@aula.com> Sent: Tuesday, January 23, 2001 1:55 PM Subject: [SE]
 2001 Who's going to Angola

I am involved in compiling an article for the British newspaper "The Daily Telegraph" about the June 2001 eclipse. Is anyone going to view totality from Angola? If so, would they mind emailing me to say where they will be? Would they mind having their name published? Thanks Sheridan Williams

From: Marc Bernstein To: SOLARECLIPSES@AULA.COM Sent: Monday, January 22, 2001 7:11 PM Subject: [SE] Angola

Hello, I have recently rejoined the list after a yearlong hiatus so I don't know what topics have been at the forefront of discussions, besides this year's TSE of course! I realize Angola is not the safest place in the world, but has anyone even inquired into going there?

From: Jean-Paul GODARD <jean-paul.godard@noos.fr>

I remember that Serge Koutchmy announced in a meeting last year in Paris that he was planning to travel to Angola. But i don't heard more at this time. <http://www.iap.fr/users/koutchmy/> Cordialement / Regards
 Jean-paul.godard@noos.fr

From: Iluvelx

(Continued on page 37)

From: F.Podmore <podmore@science.uz.ac.zw> To: <solareclipses@aula.com> Sent: Tuesday, January 16, 2001 9:52 AM Subject: Re: [SE]

Rental cars from Zim to Zam?

Daniel Fischer asked me about the policy on rental vehicles crossing the border, and I sent him the reply below, but it has bounced twice. So I'm sending it to all SEML, in case others would want the same information.

The www.budgettravel.com/zimbabwe.htm website is an amazing source of web links about Zimbabwe - I only found it two days ago!! Best wishes, Francis

From: Daniel Fischer <dfischer@astro.uni-bonn.de>

>>>Olivier, have you got any handy info on car rental in Lusaka?
 >> sorry, no. Can't help there.

A hot tip here: Ask the Zambian embassy in your home country for their recommendation! I got by far the best offer from the company the embassy in Germany told me about (which was not listed in any of three leading travel guide books, by the way). As we haven't booked firmly yet, I cannot disclose the details right now, but you can read the offer at www.astro.uni-bonn.de/~dfischer/2001 (entry for Jan. 18, 2001). Dan



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I did in fact. I called and wrote to the Angolan embassy in Washington. They were quite friendly and knew what I was talking about and why I was interested in Angola. The response I got was essentially that if I held a valid US passport and obtained an Angolan visa, that I would be welcomed and readily admitted. The civil war was downplayed, but I was advised that in rural areas there is a real danger of land mines. To be honest, I'm a big risk taker (anyone want to see my skydiving video?), and I might well have decided on Angola if I was traveling with like minded individuals. However my wife is desperate to see the eclipse and I would not want to put her in undo danger. I'm quite sure there will be individuals and teams there however. mad-den/rochester

From: Archer Sully <archer@meer.net>

My understanding is that the best conditions for the eclipse will be in eastern Angola, which is also the area of greatest guerilla activity, as there are many rebel camps just across the border in Zambia. Archer Sully



this year, collapsed a large lecture tent and a steel pole seriously injured one of the people there, had to be flown out with a head injury.

Stuff happens but why worry. I would worry more about Tse Tse's and guns. Then there are the parasites, malaria, snakes, sunburn (hopefully), yellow fever, hepatitis, broken glass, the MIR space station, etc.

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

Dear Dale, You're really encouraging me. :)

Well, luckily, I can do something against several of these things: Against yellow fever and hepatitis there are good vaccinations, and snakes usually are too afraid of us - they run (or glide) away as soon as they feel our steps shaking the ground (or so I was told). But how can I protect myself against parachuters having an accident...? ;)

And about the sunburn: I was surprised to learn that the sun won't get as high down there as at home! I don't know at what latitude you live, mine is about 51,5°N. On June 21 the sun will have a distinctly higher upper culmination at my home than in Zambia. I really didn't expect that. I knew it's winter on the Southern hemisphere, but since Zambia is well within the tropics I thought the sun would get high in the skies.

So I can imagine that there might be no dust devils since they probably need a lot of sun. Is that right? Best regards Marc

From: Cliff Turk <cliffturk@yebo.co.za>

Hi Marc and others What do you do if you get a thunderstorm? Why, you cover your equipment up to protect it. Just do the same for dust if you happen to be unlucky. Marc did miss one thing out though. He forgot the Cholera! But you were right about the snakes -- They are NOT dangerous - unless they bite! So keep out of their way.

One small tip for everyone who drives on dusty roads. Don't open the windows for air even if you have no air conditioner in the vehicle. Close the windows and put the fresh-air fan on full blast to build up a pressure in the vehicle which will stop the dust creeping in through all the leaks around doors windows etc. It is better to put up with a few degrees higher temperature and avoid the dust which will parch your throat in the first half-hour or so and you will then suffer badly. If another vehicle comes the other way or passes you,

(Continued on page 38)

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de> To: Finsternisliste <solareclipses@aula.com> Sent: Tuesday, January 30, 2001 10:32 PM Subject: [SE] **Dust devils** in Africa

Dear shadow chasers, I heard there are those dust devils in Africa sometimes, those mini-tornadoes that have been discussed here several months ago.

Let me ask again: How likely are we to see a dust devil in June, which is winter time down there? How likely are we to be hit by a dust devil? I understand they're not powerful enough to be a real danger for ourselves, but what if they dance over lenses and mirrors of our telescopes and cameras?

Surely I'd like to see one, but I don't want it to damage the equipment... Best regards Marc

From: Dale Ireland <direland@drdale.com>

The odds are slim but a dust devil hit the Oregon Star Party

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(Continued from page 37)

just switch off the fan and close the air vents. Once its dust has gone you can reopen the vents and put the fan on again. This will also avoid your cameras and other equipment inside the vehicle becoming choked with dust. If you have two or more vehicles in your party, keep a good space between them if roads are dusty. But with luck there will have been some rain so the roads are damp. Enjoy Africa Cliff Turk

From: Frans Van Loo
<fransvanlo@be.packardbell.org>

HI FOLKS. On our first total eclipse on 16 feb.1980, (also that of Patrick !), we saw many in Kenya at the afternoon. Sometimes a small came in the camping zone, but without problems for us and tents. Other "devils" must be watched when the tent is alone!!

Frans van Loo



From: Harvey Wasserman <onsite@gate.net> To: <SOLARECLIPSES@AULA.COM> Sent: Saturday, January 06, 2001 2:29 AM Subject: [SE]

Solipse - a very unusual site!!!

Has anyone heard of the Solipse festival in Zambia during the eclipse? I was just reading through the rec.travel.africa newsgroup where reference was made.

Have a look at the web site: www.solipse.com

Very unusual and creative! I keep discovering new areas. Apparently, the same group put on a festival for the 99 eclipse - I think in Hungary??? Anybody go? I'd love to hear reactions to it.

I couldn't help thinking during the Christmas eclipse that due the length of the lunar month, the total eclipse will be just 4 days shy of 6 months away, and we will be all the way on the other side of the Sun. Seems rather unusual, but more than that, helps to put the universe into some sort of perspective, or least just makes it cool! :) Harvey Wasserman

From: Harvey Wasserman <onsite@gate.net>

A little more on the Solipse festival north of Lusaka. <http://www.solipse.com> It looks like a very inexpensive way to view the eclipse. From the website, the festival goes for more than a week, and costs \$65 US. There are in and out privileges, music, food, etc. You provide the tent. They claim to be on center-line, and will arrange for pickup at Lusaka airport. In any event, their website is worth a look just for the design of it, if nothing else. Here is a quote from someone who went in Hungary...

I'm not associated with it in any way - just passing on info that I have found. Harvey Wasserman



From: Bryan Brewer <bryanb@earthview.com> To: <SOLARECLIPSES@AULA.COM> Sent: Monday, January 29, 2001 7:32 PM Subject: [SE]

June eclipse cruise in Indian Ocean

A quick announcement to let folks know that I plan to participate in a cruise June 14-27 on the privately chartered 220-passenger m/s Royal Star, sailing from Mombasa, Kenya, to view 2m45s of totality in the Mozambique Channel on June 21st. Other eclipse lecturers include Owen Gingerich (Harvard) and Paul Knappenberger (Adler Planetarium). Optional safari extensions in Kenya after the cruise.

Complete details at: <http://www.earthview.com/travel/eclipse2001cruise.htm> (You're welcome to publish links to this page.) Bryan Brewer author of ECLIPSE



From: Jeff Batten <jeff.batten@csun.edu> To: <solaRECLIPSES@AULA.COM> Sent: Monday, January 29, 2001 6:21 PM Subject: [SE] eclipse tours

Hello, Someone had setup a very complete web site that had links to all the eclipse tours. I seem to have lost the http address. Can someone post it. Thanks Jeff

From: Bill Kramer <bill@autocode.com>

I've got one at <http://www.eclipse-chasers.com/e2001.htm> - Don't know how complete it is, but it is a list. -Bill Kramer

From: Eric Pauer <pauer@bit-net.com>

I'm not sure if you are referring to mine, but I've been keeping a list of 2001 eclipse tours at:

<http://www.bit-net.com/~pauer/eclipse99/elinks/elinks.htm>

I've been making updates every week or two. If you know of a tour/trip not listed, send me an email with the name of the tour/trip and its web address. Regards, Eric



From: B Yen <byen00@earthlink.net> To: <SOLARECLIPSES@AULA.COM> Sent: Friday, January 19, 2001 8:41 PM Subject: [SE]

Best price to Lusaka

Part I: "Airing it" to Lusaka A while back, the issue of roundtrip ticket prices to Lusaka came up. Someone recommended having the agent book 2 separate flights (instead of \$5000 for roundtrip fare, it's far less =).

How have the list members fared, in getting the best airfare to Lusaka? (say from USA. Say from West Coast). Please tell me what is a good price, so-so price, outrageous price, etc. I need further advice from Olivier Staiger (who works in travel industry).

Part II: "land portion" on a budget. (I know the \$4000-\$5000-\$6000 quoted prices for complete eclipse tours is WAY too much for me)

I am willing to camp out under the stars (this may not be advisable being alone, out in middle of nowhere. Could be too risky. But, I pulled it off in SE Turkey in '99, which still amazes me). This means, I don't have to pay big \$\$ for fancy motels (which I don't like anyway)

"Camping is available for only \$11 per person per night" (found on the Internet) rental car (4x4) VS hiring a driver (which I did in India '95 eclipse) teaming up with other "independent eclipse chasers" to observe from a site roam around Zambia, looking for our own "safari adventure"

I am looking for a *friend* in Zambia. Like an amateur astronomer, who really knows the geography (good eclipse site) & we can work together on the eclipse & nighttime astrophotography.

Are there any scientific eclipse expeditions going to Zambia? That would be a good outfit to "attach myself to".

From: <OwDLRU@aol.com>

Take a look at www.eclipsesafaris.com He has air fare from LA for about \$1700 r/t

From: Olivier Staiger <olivier.staiger@span.ch>

Dear friends, I actually work in limousines & car rental. Got no specific contacts in airlines, sorry. But this is what I usually do to find airline tickets: I see specific websites of KLM and BA or Lufthansa or Alitalia for special offers. I also see what www.kuoni.ch offers (but those tickets may probably only be bought from Switzerland, I guess). Now unfortunately the market is very volatile. Also, there are not hundreds of airlines that fly to Zambia, the choice is limited. I fly to Amsterdam with KLM. Then the choice is: if you fly by day, it is KLM, but you arrive late in Nairobi and will have to stay overnight before taking next day flight to Lusaka. So the other choice is a night flight from Amsterdam to Nairobi. This is in KLM-partnership with Kenyan Airways. Arriving in Nairobi in the morning, with onward flight to Lusaka a couple of hours later. I don't know the exact cost right now, I'll have to check it out (booked through a travel agency). May be around 900\$ or so, maybe more, maybe less. Usually, one can find cheap "last minute" offers in the 2-3 months prior to departure (e.g. such as some flights to New York from Switzerland right now in the winter, as low as Sfr. 390.--, around 250 US\$!). But I doubt that rates will go down for Lusaka, as so many people will want to get there and so few flights are available. Also: the very low fares you may find advertised as "... starting as low as xxx..", those cheapest fares are often not available on every day but only on selected days. Very low cost flights are available from Europe to USA right now and in November to early DEcember, but June will be different. Or maybe you might find a "last minute" offer low cost for the transatlantic flight, but then you might not find an adequate connection from Europe to Zambia. Or you may find a low cost pair of tickets, but with dates one week apart and you'll spend more time and money in Europe. Olivier "Klipsi" Staiger

From: <Kidinvs@aol.com>

As many of you know, I have a tour going to Zimbabwe and Lusaka to see the eclipse... www.eclipsesafaris.com My

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package includes air. I have 2 departure dates which leave from any US gateway to London on Wed, June 13th PM, and arrive in London on June 14thAM. My departure flight is on Air Zimbabwe on June 14thPM, and arrives in Harare on June 15thAM. From there, you catch a flight to Lusaka. Then, I have a second flight departing from London on June 19th arrive in Lusaka on June 20th. The return flights are on June 22, and June 27th. The fare is \$1310 rt from LONDON, with an add on fare from the US gateway. That price is for people NOT taking my ground tour as well. If you have interest in the whole tour, the fare is \$1110. from London. I HAVE A VERY LIMITED # OF SEATS available for those NOT participating on my ground tour.. If I can be of help, email me directly, and I will try to be of assistance. Eric Brown

From: Peter Tiedt <rigel@stars.co.za>

> Part I: "Airing it" to Lusaka

What you could do is fly to NY, then to Johannesburg, and then on to Harare or Lusaka. At the moment JHB-NY return fares can be had (over here) for about \$650 - 700. There are daily flights ex JHB to both Harare, Victoria Falls, Malawi and Lusaka. Driving is also an option, but fuel is difficult in Zim at the moment.

> Part II: "land portion" on a budget.

Mvu Lodge (in totality) on the Zambezi may have some room. e-mail johan@mvuulodge.com His 4 night package including all activities and meals is about \$1300.

> I am willing to camp out under the stars (this may not be advisable being alone, out in middle of nowhere.

Could be too risky. But, I pulled it off NOT to be recommended. If in the city you will be robbed. If in the bush you will be eaten Cheers Peter

From: Daniel Fischer <dfischer@astro.uni-bonn.de>

> The fare is \$1310 rt from LONDON

That's incredibly expensive: Our groups pays about DEM 1350 for Germany - London-Gatwick - Lusaka and back, which would be about \$600. And it's a regular British Airways flight. So I would recommend pestering your travel agents a bit harder about the air fare. Be warned, though: Lusaka has become a pretty popular destination, and many planes are already fully booked... Daniel

From: James R. Huddle <huddle@usna.edu>

Please have a look at the Innovations in Travel web page at <http://www.innovationsintravel.com/> The shortest trip (20-23 June) to Lusaka is 1200 US Dollars per person, with a \$445 single supplement, from New York. This includes lodging at the Laughing Waters resort, which is not like a spa in California or a chalet in the Alps, but is clean, comfortable, and quite charming. The proprietress lived in the US for many years, and is a lovely lady and a charming hostess. There is a conference hall. Ostriches live on a pen on the grounds. Just outside Lusaka, Laughing Waters will experience over three minutes of totality - I don't have my notes handy, but I think it is about 3:15. Contact me off-list and I will give you the lat & lon, and an accurate duration of totality. Looking forward to seeing Bob's pictures! Jim Huddle

From: <Kidinvs@aol.com>

Please have a look at the Innovations in Travel web page at <http://www.innovationsintravel.com/> The shortest trip (20-23 June) to Lusaka is 1200 US Dollars per person, with a \$445 single supplement, from New York.

That is land only..... sorry...

From: Mike Murphy <evmurph@zetnet.co.uk>

(Continued on page 41)

British Airways currently have a special offer on long haul flights from the UK which ends at the end of January. London Gatwick to Lusaka via Harare is less than 400 UKP per person return. Note that special conditions apply and that much of the cheap(er) seats close to the eclipse date are fully booked. - Mike

From: B Yen <byen00@earthlink.net>

I was about to buy this ticket, but they have a luggage restriction according to weight. 50 lbs MAX (carryon & checkin). Since I bring 1 carryon & 2 check-in cases (70 lbs each. This is within the BA limits, LAX to London Heathrow), I will be 140 lbs overweight going from Gatwick to Lusaka. The agent 1st told me the penalty will be \$150 max. Then, they tell me there will be \$300 charge..one way. I.e., it's going to cost me \$600 extra. (some bizarre formula. it came to: $2.1 \times \# \text{ lbs overweight} = \300). Other travelers note: you will get hit with a penalty too, both ways. I spent 1 hour arguing with BA supervisor. Couldn't get her to waive it. She kept telling me to call the baggage dept, "I can give you their phone #". I said "Why? Well, that's BA who will be pocketing that \$600, right? Why can't you discuss it with me NOW??" Well, because BA wants to "shaft me" on the day of travel. That's just "business".

Question: Does anyone know of any way of getting a waiver of this penalty? I will be talking to some people today, to investigate this.

(the above problem goes away, if they ticket it as one roundtrip ticket: the baggage is checked all the way thru, no penalty fees. Except it costs \$2800. The problem arises when it's ticketed separately, which is considerably cheaper: \$1500)

BTW, I had a nasty incident on the way to Turkey for '99 eclipse. Delta was going to charge me \$1500 (!) penalty for being overweight 10 lbs on checkin case #1, 8 lbs overweight on checkin case #2. So, I had to dismantle both cases, & lessen the weight. Then, everything was OK. Can you believe that..Delta was going to "blackmail" me into \$1500 overcharge (thereby doubling my \$1500 ticket, LAX to Istanbul)!! Well..that just shows you, they'll "stick it you" if they can. Watch out. I had to pay a fee to Thai airways (LAX-New Delhi) on the way to the '95 eclipse. (I think it was \$300, which covered both ways).

I would encourage everyone to look in to possible overcharge fees. (people WILL be bringing extra equipment for the eclipse). Believe me, finding out about charges at the time you are flying is the WRONG time to discover it. They have you by your balls at that point, there's no negotiation, either you pay it or...you don't fly.

On the subject of "fees": I was concerned about bringing lots of camera gear to Turkey. There is a thing called Carnet, which costs \$300 (? I don't remember). It's some international pass thing, which will "make things easier". (don't remember the technical reason). Turns out when I got there, Turkish customs didn't care. As a matter of fact, there was NO ONE manning the booth who was going to check on those things. I DID get someone to sign a paper, saying that the I *brought* the camera-gear in on arrival to Istanbul. I did have all my equipment *Declared* by US customs (1 week before I left), so that's documentation that I brought the equipment into Turkey & would be leaving with it. (otherwise the host country might think you're selling it. In which case you have to pay "duty").

I ran into this problem in India ('95). They were going to charge me duty on my camera equipment. (\$2000 bucks). I still don't know how I got out of that mess. A supervisor came in & cleared it up.

Question:

I need comments by people on any "issues" regarding bringing camera equipment into Zambia (Just before the '98 eclipse, a friend in Curacao faxed me a specialform for eclipse equipment, letting me declare my eclipse equipment before hand. Otherwise, I would have had to pay duty. It would have been astronomical!!)

I need comments about any other "hidden fees" or "gotchas".

I want to know everything before hand, get documents ready, have a contingency plan for any possible "issues".

Doing the eclipse is EASY. The logistics of getting there is the hard part. (especially tracking the weather, staying mobile, & moving if you have to.) My problem is increased, since I bring a lot of equipment. (getting stuff transported,

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watching out for weight fees, lugging it around).

"Preflight preparation precludes post-flight peril" -- old military aviator's saying

From: <Kidinvs@aol.com>

I have done some extensive searching for cheap fares to Lusaka, and Harare for travel around eclipse time. I have found the following..... THERE IS NONE. Every airline I have looked at using the various web search engines, as well as phone calls has only given me limited seating at prices over \$3000 US. There are still some seats left at \$1310 rt from London Gatwick on www.eclipsesafaris.com Eric Brown

From: Mike Murphy <evmurph@zetnet.co.uk>

Well, my eclipse observation equipment weighs only a few hundred grams and I anticipate that my total baggage weight will be less than 12Kg so the BA weight limit is no bother for me. I did think about taking a small telescope but the hassle of the weight, the bulk, the insurance and the fact that I'd probably only use it for one day of the whole trip meant that I decided on the light weight option (eclipse glasses un-used from 6/1999 and binoculars). - Mike who never takes more than he can run with.

From: Assoc Prof J R Huddle <huddle@usna.edu>

I spoke with Renate Martin, President of innovations In Travel. She told me that the US\$1200 price for the package she calls ZAM-1 is indeed "land only", but that the prices for the other trips include air fare. In her e-mail to me, she said she would let eclipse list members have this short trip for US\$2695 per person sharing a room; that includes air fare from the East Coast. She emphasized that this fare is available ONLY to members of this list. People outside the USA may e-mail Renate at innovationsintravel@msn.com to inquire about packages departing from Europe or elsewhere. In the interest of disclosure, let me mention that I will be leading a tour to Zimbabwe for Innovations in Travel. Best regards, Jim Huddle



From: hilde & werner
<antares@freegates.be> To:
S O L A R E C L I P S E
<SOLARECLIPSES@AULA.COM> Sent: Thursday, Janu-
ary 25, 2001 7:34 PM Subject:
[SE] **10 day Eclips tour in
Zambia and Zimbabwe**

Next Saturday, the 27th of
january there is an info meeting
about a 10 day eclips trip to
Zambia/Zimbabwe in company
of Belgians Space Shuttle as-
tronaut Dirk Frimout at the
popular observatory of Ant-
werp, Urania, Mattheessen-
straat 60, 2540 Hove
(Belgium) . Phone
+32.3.455.24.93 . Income free.
<http://www.urania.be>
Werner Hamelinck



From: Jeff Batten <jeff.batten@csun.edu> To: <solaRECLIPSES@AULA.COM> Sent: Friday,
January 26, 2001 12:40 AM Subject: [SE]

Zimbabwe and Zambia Info

<http://www.odci.gov/cia/publications/factbook/geos/zi.html#Intro>

<http://www.odci.gov/cia/publications/factbook/geos/za.html>



From: Eric Pauer <pauer@bit-net.com> To: Solar Eclipse Mailing List <solareclipses@aula.com> Sent: Tuesday, January 02, 2001 1:05 PM Subject: [SE] 2001 **TSE Tours/Trips**

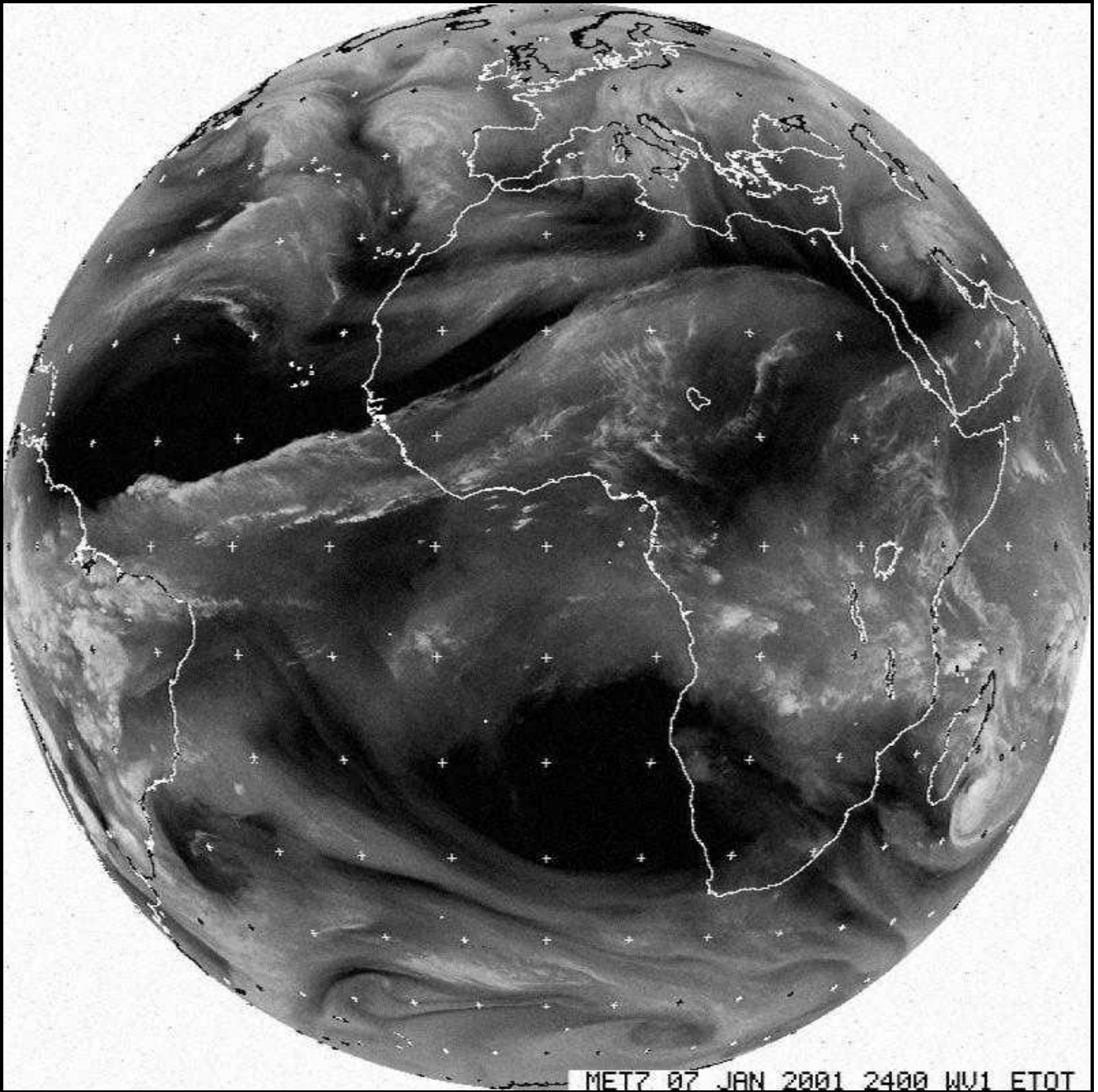
For those still deciding if/how to see totality in 2001, I've recently updated my page of 2001
Eclipse Trips at:

<http://www.bit-net.com/~pauer/eclipse99/elinks/elinks.htm>

There are currently about 50 trips listed, most with space still available. Enjoy! Eric



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From: Jeff Batten <jeff.batten@csun.edu> To: <solaRECLIPSES@AULA.COM> Sent: Monday, January 29, 2001 9:22 PM
Subject: [SE]

Satellite views of Africa?

Hello, Does anyone know of a web site that has views (photographs) of Zambia or Zimbabwe from space. Thanks Jeff

From: Daniel Fischer <dfischer@astro.uni-bonn.de>

<http://photojournal.jpl.nasa.gov/cgi-bin/PIAGenCatalogPage.pl?PIA02640>
<http://photojournal.jpl.nasa.gov/cgi-bin/PIAGenCatalogPage.pl?PIA02621>
http://modarch.gsfc.nasa.gov/MODIS/LAND/VAL/s2k_sites.html - these are
some recent releases of space images of the region soon to be eclipsed. Daniel

A F R I C A 2 0 0 1

From: <virtual@turtle.co.za> To: <solareclipses@Aula.com> Sent: Tuesday, January 23, 2001 6:42 AM Subject: [SE]
Sawubonga Solar Eclipses people

Sawubonga Solar Eclipses people, Ifetayo!Unjani? (Isi-Zulu: "hello, how are you ?")

The Africa Adventure Travel Center have organized a special scheduled 21day solar eclipse overland expedition.

- Capetown-> Vic Falls Departing 1st June, Cape Town.

Partake in both of nature's wonders - the solar eclipse on the 20/21 June and the Vicc Falls in one go!

Price 670US\$ Limited seats 26 per tour (11 seats booked already) Departure - Cape Town 1st June 2001
FORMAT OF TRIP - WHAT IS AN OVERLAND EXPEDITION? An overland expedition is a journey in a custom build truck along a suggested route aimed at the more adventurous and budget-conscious traveller. It is off the beaten track, and many of the areas visited do not have the infrastructure that the package tourist may require. The route taken may also vary from time to time due to various factors but we will be on time to experience the solar eclipse at Vic Falls on 21/6/2001. We actually arrive at Vic Falls on the 20th were the diehards can make there way up to Lusaka. We will advise and assist in this if required.

For more details contact virtual@turtle.co.za Best Regards Hans Cape Town, South Africa

<http://www.abisa.co.za> Leaders in budget travel throughout Southern Africa. Daily and weekly departures to Victoria Falls, Zambia, Okavango Delta, Kruger national park, Namibia, Mozambique.

<http://www.itravel2.co.za> Africa on a budget forum. Check here for last minute specials, tips and what others have to say about traveling in africa. Also share your travel experience here.

<http://www.longstreet.co.za> Simply the best NetAddress in Cape Town

<http://www.turtle.co.za> If you have to check your e-mail at the speed of light then GoOnline at our ic@fes in Cape Town central

VT1 - on Greenmarket Square above purple turtle Cnr Long and Shortmarket Street on Green Market Square. Opening hours from 9am to 7pm. Mon-Sat. ++27(21) 424-1037 virtual@turtle.co.za <http://www.turtle.co.za/html/icafe.html>

VT2 - next to the Garden center 12 Mill Street Opening hours from 9am to 10pm Mon-Sun. ++27(21)462-0470 virtual2@turtle.co.za <http://www.turtle.co.za/vt2.html>

VT3 - next to Turkish baths 303 long street Opening hours from 9am 9pm Mon-Sun. ++27(21)423-7508 virtual3@turtle.co.za <http://www.longstreet.co.za>

VT4 - Mega Turtle in waterfront with 100 terminals! watch press for details! Emergency contact number only mobile - 0828806335



From: Alyn Kelley <alyn@well.com> To: <SOLARECLIPSES@AULA.COM> Sent: Thursday, January 18, 2001 6:34 PM Subject: [SE]

Time of day in Zambia?

Hi there! I'm a recent addition to this list (a few weeks ago), and am going to Zambia in June to see my first solar eclipse. I have a question which may be very basic to you folks, but which I can't easily seem to find an answer to on all the eclipse web pages.

what time of day will the totality occur in Lusaka? all of the maps show what appears to be UT1 time, but I have no idea how to convert that to actual local time of day, or even if that IS local time of day. any help/links greatly appreciated. apologies if this was asked recently or if there's a FAQ I'm unaware of. Alyn Kelley, USA

From: Peter Tiedt <rigel@stars.co.za>

Local time in Zambia will be about 15h15. Zambia is UTC + 2. Have a look at my website - www.eclipse.za.net Cheers

From: James R. Huddle <huddle@usna.edu>

Welcome to the list, Alyn. Zambia and Zimbabwe are both on UT+2, so 11:00 AM UTC = 1:00 pm Zambia time.

Before you do ANYTHING else, go to Fred Espenak's NASA Eclipse page, <http://sunearth.gsfc.nasa.gov/eclipse/eclipse.html> and bookmark it. Maybe 2/3 of the way down, you'll find a heading, "Eclipse Resources". Several more lines down, is a subheading, "Special Help Features". The first link under this subheading is "All About Time Zones and Universal

(Continued on page 45)

AFRICA 2001

Time", but as you're scanning down toward this link, you'll find LOTSA other links of interest. Jim Huddle

From: Cliff Turk

Alyn Kelley's query may interest others too.

Here it is;-

Angola is UT + 1 hour;

Zambia & Zimbabwe are UT + 2 hours;

Mozambique UT + 3 hours

Lusaka: (UT)

1st Contact 11h41m34s

2nd Contact 13h09m19s

3rd Contact 13h12m33s

4th contact 14h27m00s

Totality = 3m 14s

Just add 2 hours to get local time Cliff Turk

From: Stephen McCann ITN <stephen.mccann@roke.co.uk>

You may also be interested in this very clever web site (if it's not been mentioned before).

<http://eclipse.astroinfo.org/sofi/maps/solecl-2001-06-21-zambia2001.html>

I've quickly 'reversed engineered' the mouse position, so given your lat & long, you can enter the approximate x and y coords to drive the calculation. Hmm, well I hope you know what I mean. Send me a mail if you want the details.

The site also contains other interactive maps by going up one level.

The results that were achieved for Chisamba Lodge (which is where I hope to be) were fairly accurate to within about 15 seconds. Kind regards Stephen McCann

From: Crocker, Tony (FSA) <Tony.Crocker@transamerica.com>

It is an impressive site, but Emapwin is better. The detail maps are comparable and a bit easier to read, although they are only offered for selected locations in 1999-2015 plus a few more for Europe. Both programs will take latitude and longitude inputs and show local circumstances. A very worthwhile bookmark, especially for those who don't want to download and store 26MB of data from Emapwin. Emapwin's advantage is mainly flexibility: The maps can be zoomed to as small a scale as desired for any eclipse at any location from years -3000 to +3000.



From: Mark Peebler / It's All Good <weLive@itsallgood.com> To: <eclipsers@totalsolareclipse.com> Sent: Sunday, January 28, 2001 5:36 PM

I regret to inform you that based on feedback we have received in the past ten days, we feel we have no other choice than to **cancel** our eclipse trip. We have labored over this decision, but feel that the situation will not change by June and that we needed to make a decision soon enough to give people time to find an alternative trip.

"...we have spoken to several competitors, tour operators, and the like, and we are all of the opinion, that the fuel shortage will not be any better in June. You could really have a situation, where you all arrive at a garage for a refill, and there is no petrol available and no one knows when the next petrol truck will come. It is time to reassess your route and your whole itinerary."

This came from the company with whom we have a \$50,000 contract on motorhomes. They had been positive all along until we received this e-mail last week. It is really too much to risk. We are still receiving positive feedback from our Zimbabwe tour operators and other suppliers, but I have to weigh heavily the above e-mail from the motorhome company, whom, as far as our commitments go, has the most to lose (from a business standpoint).

We are requesting our deposit back from the motorhome rental company and will await your response as far as air arrangements, if you would like to keep the air arrangements you have with us, even add-on Harare to Lusaka (\$150), please let me know. We have heard that there is availability on other trips (list of links to other trips <http://sunearth.gsfc.nasa.gov/eclipse/TSE2001/TSE2001link>).

(Continued on page 46)

A F R I C A 2 0 0 1

From: <JohnLX200@aol.com> To: <SOLARECLIPSES@aula.com> Sent: Saturday, January 06, 2001 7:44 PM Subject: [SE]

Who will be in Kafue Park?

Hi, The mayhugh.com Kafue Park trip which I'd been on was canceled due to logistics, after Roy Mayhugh visited the Musungwa Lodge and decided he couldn't be confident we could make it from there to the eclipse path in a reasonable amount of time, and I decided not to go on the replacement trip he offered with a Harare/Hwange start, Lusaka area viewing, and Vic Falls ending.

I am now confirmed on a camping safari which will be in Northern Kafue Park for the eclipse. Because it is a camping safari in tents rather than lodges, it is much less expensive also. While the exact group I am in is now full, as is another group with identical itinerary, there is space left on a third, shorter itinerary run by the same company, crossing paths on eclipse day.

The tour operator is Karibu Safaris at <http://www.karibu.co.za/specials.htm> Both 10-day tours are sold out now, despite it still showing 3 spaces. Mine. :-) It shows 5 spaces left on their C tour, but that was a few days ago.

Additional info is available at the US travel agent I booked it through, Louis van Tonder of African Safari Consultants, in California: <http://www.classicsafaris.com/> The price of \$1338 per person may be the only bargain left in Kafue.

I thought I'd mention it here before some travel agent grabs all the remaining spaces on that one too and then tries charging a crazy price for it. Trust me, it is getting quite difficult to get into the umbra in Kafue Park on eclipse day. For example, I found only one 4-passenger charter plane available in Lusaka at the eclipse-specially-high price of \$1890 for the day to get there and back in case I hadn't found a way to get there on the ground. For another exam-

ple, what should be a \$4000 tour is being offered for \$7800 by a museum I belong to. A bit larger donation than I'd care to make! Ironically, although they think they have space left, I'm pretty sure the lodge operators have already sold it out from under them to a Swiss group, unless that's who they are buying it from.

I can easily understand why most tours are heading to Lusaka to simplify their logistics, but I decided not to hang out in the city for 3 or 4 days when I could be seeing the countryside. Hoping to cross paths with some of you in June, John Hopper

From: James R. Huddle <huddle@usna.edu>

Innovations in Travel also has a few spaces left in their Zimbabwe tour and several spots in their Zambia tour. To request info, send e-mail to innovationsintravel@msn.com. Jim Huddle

From: <JohnLX200@aol.com>

Probably over 50% of all tours have space left. Eric Pauer and others have great lists of links, and Web searches find plenty also. It's only the ones doing the observing from Kafue Park that I had a very difficult time finding space on. John



html), but that the air seats have filled up...We looked into setting up a entirely different itinerary to Zambia, without motorhomes, but have decided that there are plenty of other trips with availability and we could not get it near the cost of our first itinerary to Zimbabwe.

I will know in the next few days how soon the rental company can have the deposits back to us. Please advise me on your airline arrangements.

I apologize for the inconvenience, but I assure you, better now than to miss the eclipse because of infrastructure problems in June. IT'S ALL GOOD Mark W. Peebler (and Krysta, Maya, sampson and delilah)



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From: F.Podmore <podmore@science.uz.ac.zw>
To: <solareclipses@aula.com> Sent: Tuesday,
January 16, 2001 9:48 AM Subject: [SE] Zim
ECLIPSE stamps, and ...

Hello all,

1. The Philatelic Bureau of the Zimbabwe Posts and Telecommunications Corporation have recently announced that a set of 4 (I think) commemorative ECLIPSE STAMPS will be released on April 24th. (I don't know why that date - maybe it should mark the 'launch' of eclipse awareness campaign....) And I don't know the cost or denominations of the set, nor have I seen the designs, but I did submit some suggestions to the artist, Cedric Herbert. The local eclipse committee was instrumental in getting the stamp issue approved.

I COULD offer to buy and send sets of stamps to any of you who would like them, if you could refund me in UK pounds to my English bank account, but I've no idea how many of you would want them - would I be overwhelmed with requests??? Or are there overseas philatelic suppliers who could meet your requirements?

2. I'm going to be in England for two weeks from today, so any emails to this address (which has

changed slightly - please update) won't be answered til I get back. You can try to contact me at fpodmore@yahoo.com but I won't have very frequent (or free!!) access to that, so be patient.

3. We enjoyed a **SPLENDID** virtually cloud-free view of the Lunar eclipse, and two days later photos were splashed across the front page of the national newspaper - The Herald. (:)) But the print quality is not high.

Best wishes for the next solstice!! Francis

From: Cliff Turk <cliffturk@yebo.co.za>

Hello Francis Yes please. I would like four sets of the Eclipse stamps and if a special First Day Cover is also being produced, I would like four of those too, please.

I can pay in sterling quite easily, or we might be able to arrange a swop with my book on the eclipses. Best wishes Cliff

From: F.Podmore <podmore@science.uz.ac.zw>
To: <patrick_poitevin@hotmail.com>
Cc: <patrick_poitevin@CotyInc.com>
Subject: **Excellent Solar Eclipse Availability - 4 (fwd)**

Date: 01 February 2001 04:13

Hello Patrick,
Several things to mention, so I'll be brief... you're probably busy....

1. Many thanks for sending my solar eclipse collection panel to my father - I collected it on my recent trip to England. I actually thought I had left two panels in Antwerp, but if I didn't then my memory is playing games...

2. I have composed three documents about the TSE in Zimbabwe, with information which visitors and locals will find useful. I would like to put them out over SEML but you have said "No attachments". So what should I do? I can send them to you to preview and then judge if you like.

3. I have just received the email below from Geoffrey Carew - he was planning to build a tented village in the totality zone in Zim but has decided to move the whole camp to Zambia. I am sure SEML readers would like to know about it - can that be 'allowed' or just the message without the attachment? Otherwise you (or I) can post the following on SEML....

A F R I C A 2 0 0 1

ENQUIRIES can be sent to Philippa or Geoffrey at carew@carewsafaris.com
His WEBSITE (www.carewsafaris.com then click the ECLIPSE link at the top
of the home page) gives information about what he was planning in Zimbabwe
and hasn't yet been updated, but anyone interested can go there to see
what it is going to be like, but now in Zambia.

4. I had problems accessing January SENL2001 - I couldn't get
anything from Fred's website - I'll try again. Have others had problems??
Bye for now, Francis

Date: Thu, 1 Feb 2001 00:14:23 -0000
From: Carew Safaris <carew@carewsafaris.com>
To: carew@carewsafaris.com
Subject: Excellent Solar Eclipse Availability - 4

BEST / ONLY SOLAR ECLIPSE SAFARI STILL AVAILABLE
Have you got clients looking for space accommodation or safaris over the
Eclipse.

We still have space available on our Tented Village - Victoria Falls Eclipse
Special. 20th - 27th June 2001

This is an excellent up market itinerary at very reasonable prices,
incorporating the best viewing location for the Eclipse in Africa,
adventurous but civilised canoeing and walking in the Zambezi National Park
and the splendid Victoria Falls Safari Lodge.

Unfortunately, Victoria Falls Safari Lodge has only given us until February
20th to sell this safari and to the 28th to pay 50% deposits. Owing to
these strict conditions, we have to take the bookings on a first come first
served basis. If you are happy to give us a guarantee by 20th February to
pay 20% deposits, we will provisionally book the relevant number of spaces
out to you. If you subsequently failed to sell these spaces, and we did
resell them, we would refund you the relevant deposits you had paid.

We still have 50 spaces available, but we have various other enquiries
currently active, including a 16 pax group from Europe, a group of 20 from
the USA and a group of 6 from the USA. We state this so that we cannot be
accused of misleading anyone, it is first come first served.

We are also holding 50 reservations with Air Zimbabwe Ex London on 19th June
(arrive Lusaka on 20th) and ex Vic Falls to Harare to London on 27th June.
We can arrange transfers from Lusaka, Victoria Falls or even Harare by
luxury coach or mini bus.

I have enclosed the itinerary again below :

Victoria Falls Eclipse Special. 20th - 27th June 2001
Availability 50 pax.

This itinerary is suitable for groups as well as individual bookings, and
combines the Tented Village in Zambia for two nights, the Victoria Falls
Safari Lodge for 3 nights and canoeing on the Upper Zambezi with Paul
Connolly's Odyssey for 2 nights.

AFRICA 2001

The safari is priced at rack US \$ 2,125 and STO US \$ 1,700 inclusive of all transfers. (not including international flights or flights to Harare on 27th June)

ITINERARY

20th June - Arrive Lusaka at 9.00 am - Transfer by coach to The Tented Village, 68 km's North of Lusaka. (The clients can also arrive on 19th June and can be transferred from Lusaka, Victoria Falls or Kariba. This package is inclusive of transfers from Lusaka on 19th or 20th. - Transfers ex Vic Falls or Kariba will incur surcharges which will be subject to group size.)

21st June - Tented Village

22nd June - Transfer after breakfast by luxury coach to Vic Falls Safari Lodge. (5 hours approx) - Arrive 5.00 pm.

23rd June - Vic Falls Safari Lodge. - Normal range of optional activities available at Victoria Falls, which can be done individually or in groups.

24th June - Vic Falls Safari Lodge. - Normal range of optional activities available at Victoria Falls.

25th June - Transfer to Zambezi National Park - Start canoeing / walking.

Collect group at 3.30pm and take a 1h20 drive to the campsite on the bank of the river. Dinner will be soup, main course and dessert. The entire group will camp together on both nights. The following morning, after a full English breakfast, half the group will go inland to the springlines where the walking safari will begin. The other half will commence their canoe safari. The groups will take lunch separately because at that time, they will be a considerable distance apart. Both groups will be transported back to the camp after their respective safaris. Lunch will consist of rolls, cold meats, quiches, salads and a fruit. After the day's activity, drinks will be provided and there will also be a supply of drinks at the campsite.

(Continued on page 50)

AFRICA 2002



From: Francis Murphy <fxmurphy@voicenet.com> To: <SOLARECLIPSES@AULA.COM> Sent: Sunday, January 28, 2001 8:38 PM Subject: [SE] **2002 December 04**

Hi, I wanted to start planning my trip for this eclipse, and I am looking for information on Kruger National Park in South Africa. It looks like the eclipse passes right through the park. Who would I contact about traveling, and camping in the park. Thanks Francis Murphy

From: Peter Tiedt <rigel@stars.co.za>

Have a look at www.eclipse.za.net

From: <virtual@turtle.co.za>

Also have a look at <http://www.krugerpark.co.za>



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This will include wine, beers, cokes and soft drinks. It will not include spirit. We can buy spirit in the Falls before we leave, but this will be for clients account. The following day the process is repeated with each group obviously doing the other activity. On this final day, the canoeing group will actually canoe to within a few kms of the Falls and transported back to town from there. The walking group will be transported back to town, a distance of approximately 30kms. Both group will be back in town by no later than 17h00. This can easily be brought forward if required. June is a good month for game. The Zambezi National Park has large amounts of elephants, buffalo, waterbuck, impala and other species we could see are kudu, giraffe and sable. Cats are difficult to see in this park. At all times, transport will be by 4x4 vehicles."

26th June - Upper Zambezi canoeing / walking. - as above.

27th June - Finish canoeing and transfer to airport - 5.30 pm flight.

The Vic Falls section of the safari is actually two overlapping safaris. The clients will be divided into four groups of 12 - 13 people each. Groups A & B spend the night of 22nd June at the VFSL, then on 23rd and 24th they canoe and walk as above, and they spend the night of 27th June at the VFSL. Groups C & D spend their first three nights at the VFSL (In 22nd - out 25th) and the nights of 25th & 26th on the Upper Zambezi Canoeing / walking.

Therefore, the safaris will not feel overcrowded, and will have the same feel as a normal up market safari for 12 pax.

Please contact Philippa or Geoffrey direct on carew@carewsafaris.com if you have any questions or require more detail on any section of the itinerary. We have attached the detailed description of the Tented Village (In 19th or 20th Out 22nd) to this E mail.



The First Total Solar Eclipse of the New Millennium & some of the Best Weather Prospects ever.

Carew Safaris has been operating exclusive up market riding safaris in the Mavuradonna Wilderness for over seven years, but now we have also planned for non riders who want to witness the Eclipse from directly under the centerline in Zambia.

ZAMBIAN SOLAR ECLIPSE TENTED VILLAGE

The tented camp we are erecting just beside the Centerline of the Eclipse due North of Lusaka, situated at East 28°, 03', (57) , South 14°, 52', (28) it lies inside the 3.5 minute line. giving us a totality at the camp site of 3 minutes and 35 seconds.

The atmosphere will be similar to a grand two day wedding or race meeting, with marquees for the dining rooms, bars and lecture rooms. The accommodation is naturally tented, with hot bush showers and long drop or chemical loos. (A maximum of four tents per ablution) The food will be delicious as we have contracted Sarah Lilford, Zimbabwe's leading caterer. The administration and logistics close to perfect, despite being in the depths of nowhere, as we are working with the biggest equipment hire specialists in Southern Africa. Both the caterers and equipment specialists are very experienced a handling functions for these numbers. Carew Safaris itself has seven years experience in constructing and operating safari camps in remote locations. Its managing director, Geoffrey Carew, started as a young impresario arranging large scale charity balls and race meetings whilst at Bristol University. Now 38, he has as a further 18 years experience and knows the local people and area very well.

For those who want, there will also be a band and dancing, but set away from the main village area, so that no one who does not want night life is disturbed by it. There will be a small entry ticket price to cover the costs of the band.

ITINERARY (Accommodation is also available for the nights of the 19th and 22nd June)

20th The guests will travel by bus from Lusaka, or we can arrange car rental for those who want to self drive, arriving in time to sort out bags and have a drink before lunch. In the afternoon we have planned astronomical lectures, African cultural shows and exhibitions (including Shona Sculpture from Tengenenge) and guided tours of farming practices in this most remote corner of the country.

21st We assume that after breakfast most people will want to prepare for the eclipse, but we will also be running further lectures and shows. Lunch will be available from 12.00 until 2.30 as the Eclipse totality will occur seconds after 15.15 (3.15 pm) local time and will last for 3 minutes and 22 seconds .

22nd Whereas most people will probably want to leave after breakfast, some guests have booked to stay an extra night and the camp is available from 19th - 22nd.

(For those staying on 19th and or 22nd June trips can be arranged to the local game park as an optional extra)

PRICES

The price is US \$ 250 pppn (minimum 2 nights) and the bus transfer is US \$ 80 return to Lusaka. (see below for special tent supplements)

Solar Eclipse glasses are available at US \$ 2 each.

FURTHER DETAILS ABOUT THE TENTED VILLAGE.

Tents, Beds and Linen

The tents will be normal three man tents, (to sleep two, like a mountaineering tent or those used by the canoeing safari

companies) They will have a mattress, sheets and blankets. (like the traditional safari bed roll) Guests are advised to bring their own sleeping bag in case of an exceptional cold snap that can happen at that time or year.

A single supplement of US \$ 50 is available to anyone who wants their own individual tent.

We are sourcing tents all the time and are offering other options (at differing additional costs)

We have already sold (with deposits) 20 pax in 10 Space Saver tents. These are large walk in tents typical of the permanent tents in up market tented safari camps. These will have solid metal beds with foam mattresses, sheets and blankets. We charged a supplement of US \$ 50 pppn.

For a supplement of US \$ 70 pppn we have a sourced another 14 Eland tents, which are bigger and even nicer, with a veranda. These also have solid metal beds and foam mattresses.

Then we have ten 12' X 10' and a further six 9' X 7' cottage tents (like my old Bat Caves Camp tents), which are reasonably roomy and you can stand in the middle between the beds but not at the edges. These will have fold away metal beds with foam mattresses, blankets and sheets. Supplement = US \$ 50 pppn.

In addition, we have Mini Marquees (similar to an outdoor trade fair traders stall). There are 36 of these measuring 20' X 10' and 16 measuring 16' X 14'. These are obviously very spacious but they do not have windows yet, although we are hoping to make them. Supplement US \$ 35 pppn.

For those in normal tents who do not want a bed roll we have sourced 50 stretchers. These should be used with a sleeping bag, and blankets on top and underneath the sleeper. No supplement and personally we find them less comfortable than a bed roll.

As we source more special tents and beds, we will post them with photographs on the web site. However, we will not offer them until they have been sourced and either bought or booked.

Marquees and Catering

The atmosphere will be similar to a grand two day wedding, with giant marquees for the dining rooms, bars and lecture rooms. We have two eminent astronomers who have expressed interest in giving lectures so far.

We are also handling the logistics in similar fashion. We have contracted Sarah Lilford whom we consider Zimbabwe's leading caterer and the only company with previous experience at handling large numbers in remote locations. In 1998 she laid on the catering for a wedding for 80 guests at our Bat Caves Camp, which is 30 km from the nearest road and only accessible on horseback. We arranged the logistics but she provided one of the best three course dinners and sumptuous breakfasts I have had anywhere. The guests all rode in and we had not a single accident. I say this only to show that we are experienced at planning and logistics for such events. For the Millennium she catered beautifully for 1,200 guests.

At the Tented Village she will have the full range of catering equipment, generators, a freezer truck and a brigade of cooks, waiters and washers up. She has worked closely with Rooneys over many years and we have already booked all the equipment she needs. Dinner will be a sit down, three course meal, Lunch, an impressive buffet, sufficiently spaced to prevent long queues. Breakfast, cooked but self serve, with fruits, cereals etc. In other words we will provide food that is as good if not better than most weddings.





Joanne & Patrick

Solar Eclipse Mailing List



WE'RE ON THE WEB AT

<http://www.Mr.Eclipse.com/SENL/SENInde.htm>

THE SOLAR ECLIPSE NEWSLETTER IS A MONTHLY NEWSLETTER ABOUT SOLAR ECLIPSES EDITED BY PATRICK POITEVIN & JOANNE EDMONDS. FINANCIAL SUPPORT FROM THE RAINBOW SYMPHONY.



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MrEclipse.com

THE SOLAR ECLIPSE NEWSLETTER IS FREE OF CHARGE, BUT IS NOT AVAILABLE IN HARD COPY.

CLOSING WORDS: THANKS FOR THE THANKS

From: FRED ESPENAK
<u32fe@lepvox.gsfc.nasa.gov> To:
<SOLARECLIPSES@AULA.COM>; <eclipse@hydra.carleton.ca>
Sent: Tuesday, January 30, 2001 3:18 PM
Subject: [SE] SENL January 2001 NOW ONLINE!

Patrick and Joanne have prepared a new issue of the SENL (Solar Eclipse Newsletter). The January 2001 issue is now online in pdf format on the SENL index page of MrEclipse.com:

<http://www.mreclipse.com/SENL/SENInde.htm>

Other recent issues currently online from the above page include:

SENL - September 2000 (Old Format, 93 Kb pdf file*)
SENL - October 2000 (Old Format, 62 Kb pdf file*)
SENL - November 2000 (1.4 Mb pdf file*)

SENL - December 2000 (995 Kb pdf file*)
SENL - January 2001 (1.1 MB pdf file*)

The old format issues (no color, no figures or photos) can be read with any word processor. The newer pdf formatted issues contain graphics, photos and illustrations. Note that pdf files can only be read with Adobe Acrobat Reader. This software is free and can be downloaded from Adobe's web site (<http://www.adobe.com/>). - Fred Espenak

From: Mike Simmons
<msimm@ucla.edu>

At the risk of being chastised by Patrick for posting a "Thank You" message that doesn't add to the discussion of solar eclipses, I want to say how impressed I am with the work that Patrick and Joanne have done in producing the SENL from our online ramblings (with judi-

cious editing that presents us at our best) and making it available to everyone. It's a great resource both for those looking for information on solar eclipses and as an archive for us on the list when we need to go back and retrieve some useful information that we let get by us the first time around. It's the place to go for topics not covered by all the web pages available. Mark Margolis of Rainbow Symphony is credited with sponsoring SENL (and SEML) and he deserves our thanks for that, too. And Fred for making a place for it on the Mr. Eclipse site -- the center of the solar eclipse universe - - of course. Mike Simmons

From: Stig Linander
<linander@worldonline.dk>

Some PostScript viewers can also be used to view pdf files. I'm using KGhostview for the purpose and it works fine. Best regards, Stig.

